

### **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings of claims in the application:

#### **Listing of Claims:**

1. (Previously Presented) A computer system for generating a dimensional enhanced data grouping, comprising:
  - an input interface of a computer system receiving one or more source records comprising data generated by a hospital, a laboratory or an insurer, wherein said data represent one or more factual and one or more dimensional attributes of source record data;
  - a set of rules to detect relationships between data components;
  - a data enhancement layer comprising a server on a hardware device, communicating with the input interface and the set of rules,
  - the data enhancement layer identifying relationships between data components and
  - generating a dimensional enhanced data grouping based on the source records and the set of rules;
  - the dimensional enhanced data grouping comprising at least one data component of the source records and at least one extended dimension reflecting at least one of a causal and correlated relationship to at least one data component for the source record data appended to the at least one of the source records, wherein said at least one extended dimension comprises at least one attribute, variable, or quantity of a data component from the source record data;

a hardware storage component for storing the dimensional enhanced data group, implementing the dimensional enhanced data group into a transactional data store, and delivering the dimensional enhanced data group to one or more datamarts.

2. (Previously Presented) A system according to claim 1, wherein the set of rules develops relationships between data components.

3. (Original) A system according to claim 1, wherein the set of rules comprises a set of user-defined rules.

4. (Previously Presented) A system according to claim 1, wherein the set of rules comprises a set of rules based on at least one pre-generation function executed on the source records.

5. (Previously Presented) A system according to claim 1, wherein the data enhancement layer comprises a server configured to generate and store the dimensional enhanced data grouping.

6. (Canceled)

7. (Previously Presented) A system according to claim 1, wherein the source records comprise data specific to at least one of a patient, a provider, a test result, and an order.

8. (Previously Presented) A system according to claim 1, wherein the at least one extended dimension comprises a recombination of source records based on selected record attributes.

9. (Previously Presented) A system according to claim 1, wherein the data enhancement layer resolves relationships between data components.

10. (Previously Presented) A system according to claim 1, wherein the dimensional enhanced data grouping comprises at least one of a hierarchical grouping of one or more data components or a multidimensional grouping of one or more data components.

11. (Previously Presented) A system according to claim 10, wherein the data enhancement layer processes at least one of a hierarchical source records or a multidimensional source records.

12-45. (Canceled)